

**BIOLOGICAL STATUS OF *PACKERA THURBERI*
(ASTERACEAE: SENECEONEAE) AND ITS RELATIONSHIP
TO *PACKERA NEOMEXICANA***

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ABSTRACT

Packera thurberi (A. Gray) B. L. Turner (= *Senecio thurberi* A. Gray) is recognized as an earlier name for *Packera tridenticulata* and the appropriate new combination is proposed. The relationship of this species with *P. neomexicana* is discussed, and the distribution of each is mapped.

KEY WORDS: *Packera*, *Senecio*, Asteraceae

Turner (1993) discussed the taxonomy and nomenclature of *Senecio neomexicanus* A. Gray. In this, he noted that the taxon was typified by a Lemmon collection from the Santa Catalina Mountains, Pima Co., Arizona. He commented further that it

Was first proposed in 1883 without description. Gray, nevertheless, noted that the name was "given to a troublesome species, collected in New Mexico by *Wright*, *Thurber*, *Henry*, *Greene*, etc., in Arizona recently by *Lemmon* and *Pringle*, and within the borders of California by *Parish*, specimens of which have been variously and dubiously referred to *S. fendleri*, *multilobus*, *aureus*, etc." Gray subsequently [in 1884] formally described the species, noting in his protologue that it occurred in "Mountains and wooded hills of New Mexico..."

Trock (1999) in her doctoral dissertation of *Packera* (a segregate of *Senecio* s.l.) was apparently unaware of, or neglected to cite, the above publication. In her assessment of *Senecio neomexicanus*

she largely followed the work of Barkley (1978), who recognized four varieties in the complex. The typical var. *neomexicanus* was said to be typified by a "holotype" at GH collected by C. Wright in the Organ Mountains of New Mexico. But, as noted above, several collections were mentioned in the protologue of *S. neomexicanus*. I was obliged therefore to select a lectotype from among them, this not mentioned by Trock in her publication but accounted for by Freeman and Barkley (1995) in their treatment of *Packera* for Mexico.

Trock (1999), following Barkley, placed *Senecio thurberi* in synonymy under her concept of *Packera neomexicana*. Trock (2006), and Barkley himself, while listing *S. thurberi* as a synonym of *S. neomexicana*, noted the holotype (GH!) to be "an abnormal, narrow-leaved collection whose disposition here is purely provisional." Trock also noted that if the "type of *Senecio thurberi* A. Gray belongs within the subscription of *Packera neomexicana* (see T.M Barkley 1978), a new combination in *Packera* will be necessary."

Indeed, in my examination of type material of *S. thurberi*, I concluded that the elements concerned belonged to an alliance of taxa (listed in the above publications) centering about *Packera tridenticulata*, as treated by both Barkley and Trock. So conceived, *Senecio thurberi* becomes the earliest available name for the complex, and I have little hesitation in making the following combination to accommodate this conclusion:

Packera thurberi* (A. Gray) B.L. Turner, *comb. nov.

Based upon *Senecio thurberi* A. Gray, Proc. Amer. Acad. Nat. Sci. Philadelphia 68. 1863.

TYPE: NEW MEXICO. Grant Co.: Hillsides, Copper Mines, May 1852, *Thurber 210* (Lectotype: GH!; isolectotype TEX!).

Trock (2003), in her discussion of the taxa of *Packera* in Colorado, distinguished *P. neomexicana* (var. *mutabilis*) from *P. thurberi* (as *P. tridenticulata*) by vestiture: tomentose in the former; glabrous in the latter. But, she notes in considerable detail the complexities of the taxa, drawing upon "Four characters, when taken in combination," to help to distinguish the two taxa. Those listed were:

- 1.) "geography," *tridenticulata* more eastern, but has "jumped" upon occasion the "Rocky Mountain Front."
- 2.) "clumps," *tridenticulata* reportedly having more clumps (4+) from a stout tap root, *neomexicana* with fewer (2-3).
- 3.) achene size, *tridenticulata* with smaller ("1.5-2.5 mm long"); *neomexicana* with larger (1.5-2.5 mm long, as given in her description).
- 4.) pubescence, mostly glabrous in *tridenticulata*, but this condition grading here and there to into the more western, more pubescent *neomexicana*.

In short, Trock, for the state of Colorado, presents a tortuous account of how these two taxa differ, to say nothing of the variation that might occur elsewhere, hence my reduction or inclusion of the Colorado taxa of *P. neomexicana* as envisioned by Trock (2003) within the framework of a widespread highly variable *Packera thurberi* (including the several varieties of *P. neomexicana* recognized by yet other workers, and those of Trock 2006).

Admittedly, all of this is a sort of Pandora's Box, but my many years of field work in the areas concerned has led me to believe that there is biological reality in the recognition of a more northern, highly variable, *P. thurberi* (including *P. tridenticulata*), and a more southern, less widespread, less variable, *P. neomexicana*. The distribution of the latter is shown in greater detail in Barkley's treatment of these taxa (as *P. neomexicana* var. *neomexicana*, his Fig. 3), this largely reproduced in my Fig. 1 of the present article. My map showing the distribution of *P. thurberi* (Fig. 2) is based upon Barkley's concept of *P. neomexicana* var. *mutabilis*, along with the distributional data of *P. tridenticulata*, as envisioned by Trock (1999, 2003, 2006).

ACKNOWLEDGEMENTS

I am grateful to my colleague Guy Nesom for reviewing the paper and providing helpful suggestions.

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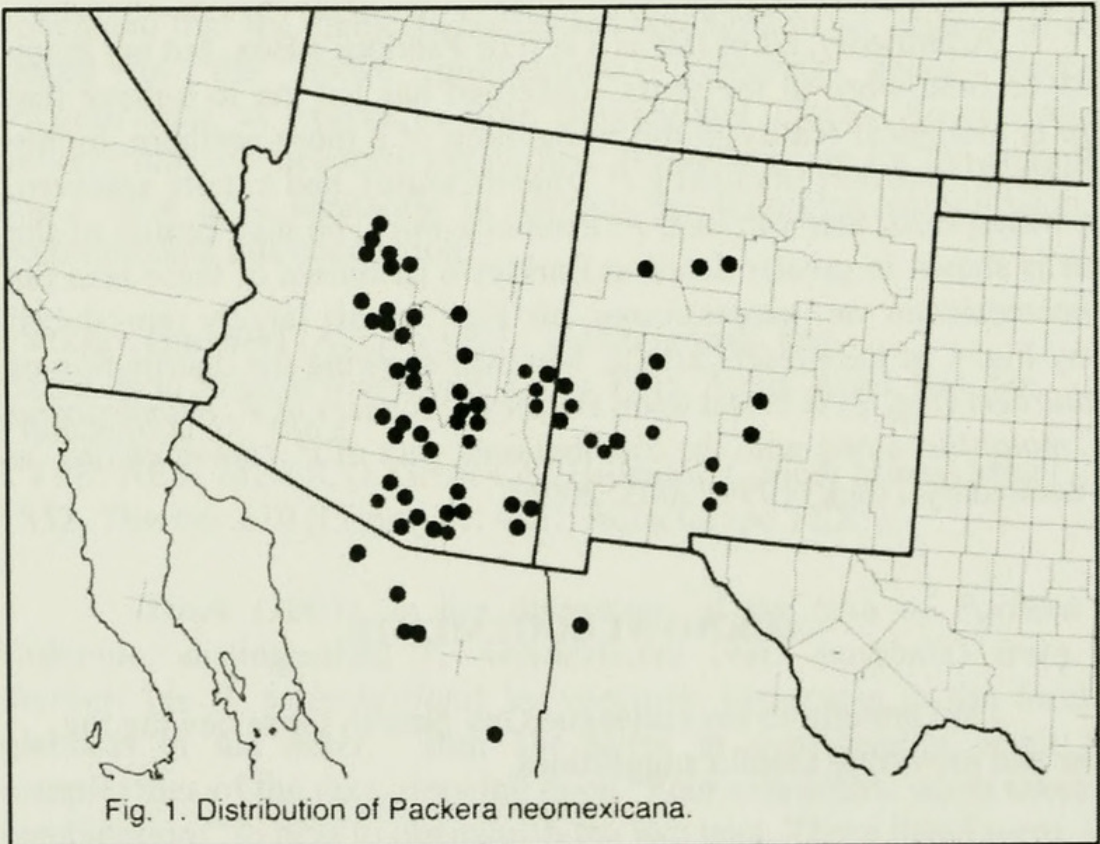


Fig. 1. Distribution of *Packera neomexicana*.

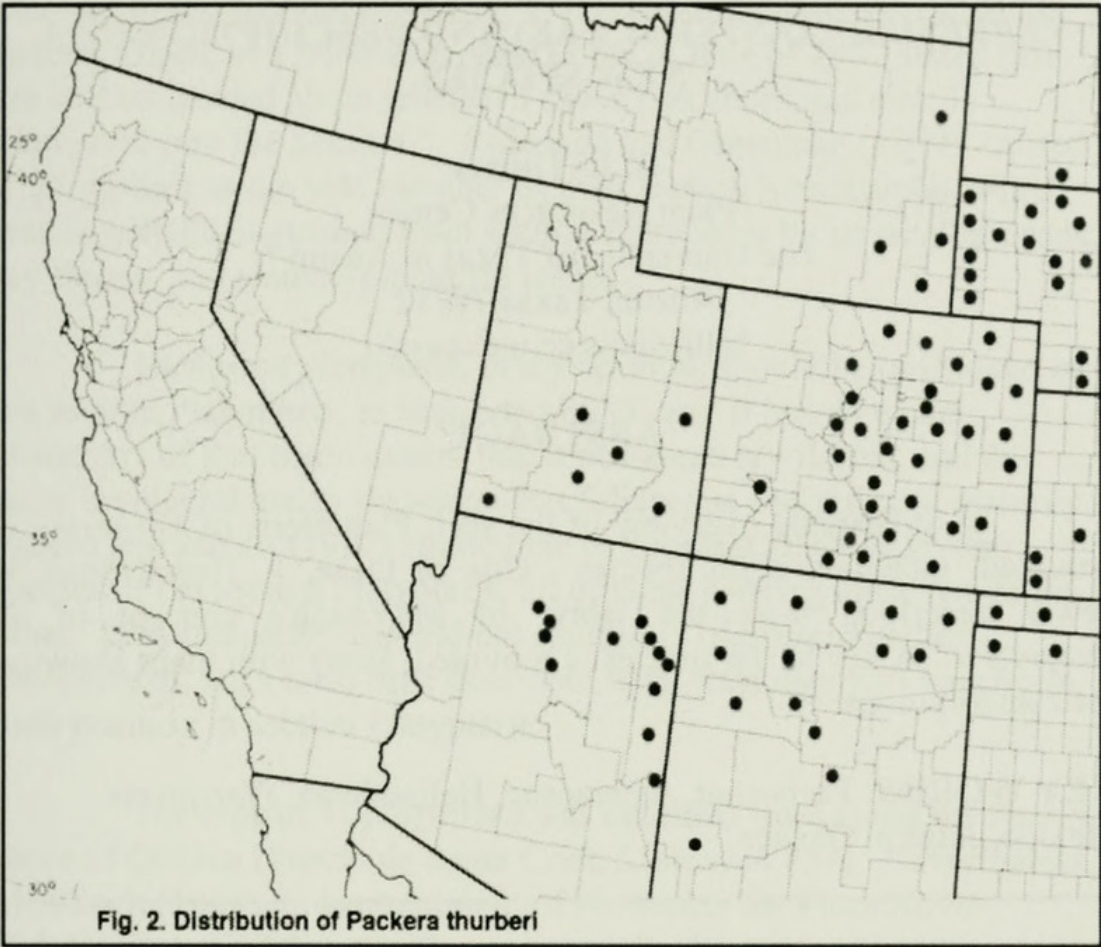


Fig. 2. Distribution of *Packera thurberi*



Turner, B. L. 2008. "Biological status of *Packera thurberi* (Asteraceae: Senecioneae) and its relationship to *Packera neomexicana*." *Phytologia* 90, 47–51.

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